WEST Search History

DATE: Wednesday, September 17, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR		
L9	L6 and (object with (relation$ or link$))	28	L9
L8	L6 and (relation with instance)	0	L8
L7	L6 and (price with instance)	0	L7
L6	L5 and account	28	L6
L5	L4 and (financ$ with transaction)	29	L5
L4	L3 and (instance same class$ same object$)	789	L4
L3	L2 and (java or c++)	1167	L3
L2	L1 and program$ and class and object	2154	L2
L1	instance and (oop or "object-oriented" or (object$ adj orient$)) and @ad<=19970801	3416	L1

END OF SEARCH HISTORY

WEST

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Search Results - Record(s) 1 through 10 of 28 returned.

1. Document ID: US 6373950 B1

L9: Entry 1 of 28 File: USPT Apr 16, 2002

US-PAT-NO: 6373950
DOCUMENT-IDENTIFIER: US 6373950 B1

TITLE: System, method and article of manufacture for transmitting messages within messages utilizing an extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

2. Document ID: US 6253027 B1

L9: Entry 2 of 28 File: USPT Jun 26, 2001

US-PAT-NO: 6253027
DOCUMENT-IDENTIFIER: US 6253027 B1

TITLE: System, method and article of manufacture for exchanging software and configuration data over a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

3. Document ID: US 6178409 B1

L9: Entry 3 of 28 File: USPT Jan 23, 2001

US-PAT-NO: 6178409
DOCUMENT-IDENTIFIER: US 6178409 B1

TITLE: System, method and article of manufacture for multiple-entry point virtual point of sale architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

4. Document ID: US 6119105 A

L9: Entry 4 of 28 File: USPT Sep 12, 2000

US-PAT-NO: 6119105

DOCUMENT-IDENTIFIER: US 6119105 A

TITLE: System, method and article of manufacture for initiation of software distribution from a point of certificate creation utilizing an extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 5. Document ID: US 6072870 A

L9: Entry 5 of 28 File: USPT Jun 6, 2000

US-PAT-NO: 6072870
DOCUMENT-IDENTIFIER: US 6072870 A

TITLE: System, method and article of manufacture for a gateway payment architecture utilizing a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 6. Document ID: US 6061665 A

L9: Entry 6 of 28 File: USPT May 9, 2000

US-PAT-NO: 6061665
DOCUMENT-IDENTIFIER: US 6061665 A

TITLE: System, method and article of manufacture for dynamic negotiation of a network payment framework

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 7. Document ID: US 6026379 A

L9: Entry 7 of 28 File: USPT Feb 15, 2000

US-PAT-NO: 6026379
DOCUMENT-IDENTIFIER: US 6026379 A

TITLE: System, method and article of manufacture for managing transactions in a high availability system

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 8. Document ID: US 6016484 A

L9: Entry 8 of 28 File: USPT Jan 18, 2000

US-PAT-NO: 6016484
DOCUMENT-IDENTIFIER: US 6016484 A

TITLE: System, method and article of manufacture for network electronic payment instrument and certification of payment and credit collection utilizing a payment

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 9. Document ID: US 6002767 A

L9: Entry 9 of 28 File: USPT Dec 14, 1999

US-PAT-NO: 6002767
DOCUMENT-IDENTIFIER: US 6002767 A
**** See image for Certificate of Correction ****

TITLE: System, method and article of manufacture for a modular gateway server architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 10. Document ID: US 5996076 A

L9: Entry 10 of 28 File: USPT Nov 30, 1999

US-PAT-NO: 5996076
DOCUMENT-IDENTIFIER: US 5996076 A

TITLE: System, method and article of manufacture for secure digital certification of electronic commerce

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

Generate Collection | Print

Terms	Documents
L6 and (object with (relation$ or link$))	28

Display Format: TI | Change Format

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Search Results - Record(s) 11 through 20 of 28 returned.

☐ 11. Document ID: US 5987140 A

L9: Entry 11 of 28 File: USPT Nov 16, 1999

US-PAT-NO: 5987140
DOCUMENT-IDENTIFIER: US 5987140 A

TITLE: System, method and article of manufacture for secure network electronic payment and credit collection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 12. Document ID: US 5987132 A

L9: Entry 12 of 28 File: USPT Nov 16, 1999

US-PAT-NO: 5987132
DOCUMENT-IDENTIFIER: US 5987132 A

TITLE: System, method and article of manufacture for conditionally accepting a payment method utilizing an extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 13. Document ID: US 5983208 A

L9: Entry 13 of 28 File: USPT Nov 9, 1999

US-PAT-NO: 5983208
DOCUMENT-IDENTIFIER: US 5983208 A

TITLE: System, method and article of manufacture for handling transaction results in a gateway payment architecture utilizing a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 14. Document ID: US 5978840 A

L9: Entry 14 of 28 File: USPT Nov 2, 1999

US-PAT-NO: 5978840
DOCUMENT-IDENTIFIER: US 5978840 A

TITLE: System, method and article of manufacture for a payment gateway system architecture for processing encrypted payment transactions utilizing a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 15. Document ID: US 5963924 A

L9: Entry 15 of 28 File: USPT Oct 5, 1999

US-PAT-NO: 5963924
DOCUMENT-IDENTIFIER: US 5963924 A

TITLE: System, method and article of manufacture for the use of payment instrument holders and payment instruments in network electronic commerce

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 16. Document ID: US 5949876 A

L9: Entry 16 of 28 File: USPT Sep 7, 1999

US-PAT-NO: 5949876
DOCUMENT-IDENTIFIER: US 5949876 A
**** See image for Certificate of Correction ****

TITLE: Systems and methods for secure transaction management and electronic rights protection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 17. Document ID: US 5943424 A

L9: Entry 17 of 28 File: USPT Aug 24, 1999

US-PAT-NO: 5943424
DOCUMENT-IDENTIFIER: US 5943424 A

TITLE: System, method and article of manufacture for processing a plurality of transactions from a single initiation point on a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 18. Document ID: US 5936860 A

L9: Entry 18 of 28 File: USPT Aug 10, 1999

US-PAT-NO: 5936860
DOCUMENT-IDENTIFIER: US 5936860 A

TITLE: Object oriented technology framework for warehouse control

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 19. Document ID: US 5931917 A

L9: Entry 19 of 28 File: USPT Aug 3, 1999

US-PAT-NO: 5931917
DOCUMENT-IDENTIFIER: US 5931917 A

TITLE: System, method and article of manufacture for a gateway system architecture with system administration information accessible from a browser

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 20. Document ID: US 5917912 A

L9: Entry 20 of 28 File: USPT Jun 29, 1999

US-PAT-NO: 5917912
DOCUMENT-IDENTIFIER: US 5917912 A
**** See image for Certificate of Correction ****

TITLE: System and methods for secure transaction management and electronic rights protection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

Generate Collection | Print

Terms	Documents
L6 and (object with (relation$ or link$))	28

Display Format: TI | Change Format

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Generate Collection | Print

Search Results - Record(s) 21 through 28 of 28 returned.

21. Document ID: US 5915019 A

L9: Entry 21 of 28 File: USPT Jun 22, 1999

US-PAT-NO: 5915019
DOCUMENT-IDENTIFIER: US 5915019 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

22. Document ID: US 5910987 A

L9: Entry 22 of 28 File: USPT Jun 8, 1999

US-PAT-NO: 5910987
DOCUMENT-IDENTIFIER: US 5910987 A

TITLE: Systems and methods for secure transaction management and electronic rights protection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

23. Document ID: US 5892900 A

L9: Entry 23 of 28 File: USPT Apr 6, 1999

US-PAT-NO: 5892900
DOCUMENT-IDENTIFIER: US 5892900 A
**** See image for Certificate of Correction ****

TITLE: Systems and methods for secure transaction management and electronic rights protection

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

24. Document ID: US 5889863 A

L9: Entry 24 of 28 File: USPT Mar 30, 1999

US-PAT-NO: 5889863
DOCUMENT-IDENTIFIER: US 5889863 A

TITLE: System, method and article of manufacture for remote virtual point of sale processing utilizing a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 25. Document ID: US 5862325 A

L9: Entry 25 of 28 File: USPT Jan 19, 1999

US-PAT-NO: 5862325
DOCUMENT-IDENTIFIER: US 5862325 A

TITLE: Computer-based communication system and method using metadata defining a control structure

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 26. Document ID: US 5850446 A

L9: Entry 26 of 28 File: USPT Dec 15, 1998

US-PAT-NO: 5850446
DOCUMENT-IDENTIFIER: US 5850446 A

TITLE: System, method and article of manufacture for virtual point of sale processing utilizing an extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 27. Document ID: US 5815657 A

L9: Entry 27 of 28 File: USPT Sep 29, 1998

US-PAT-NO: 5815657
DOCUMENT-IDENTIFIER: US 5815657 A

TITLE: System, method and article of manufacture for network electronic authorization utilizing an authorization instrument

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 28. Document ID: US 5812668 A

L9: Entry 28 of 28 File: USPT Sep 22, 1998

US-PAT-NO: 5812668
DOCUMENT-IDENTIFIER: US 5812668 A

TITLE: System, method and article of manufacture for verifying the operation of a remote transaction clearance system utilizing a multichannel, extensible, flexible architecture

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

Generate Collection | Print

Terms	Documents
L6 and (object with (relation$ or link$))	28

Display Format: TI | Change Format

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Search Results -

Terms	Documents
L1 and (oop or "object-oriented" or (object$ adj orient$))	0

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

class

Search:
```
instance and (oop or "object-oriented"
or (object$ adj orient$)) and
@ad<=19970801
```
Refine Search

Recall Text | Clear

Search History

DATE: Wednesday, September 17, 2003 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; THES=ASSIGNEE; PLUR=YES; OP=OR			
L2	L1 and (oop or "object-oriented" or (object$ adj orient$))	0	L2
L1	5630127.pn. or 5559313.pn. or 5682482.pn. or 5636117.pn.	4	L1

END OF SEARCH HISTORY

WEST

End of Result Set

Generate Collection

L1: Entry 1 of 1 File: USPT May 22, 2001

US-PAT-NO: 6236971
DOCUMENT-IDENTIFIER: US 6236971 B1

TITLE: System for controlling the distribution and use of digital works using digital tickets

DATE-ISSUED: May 22, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stefik; Mark J.	Woodside	CA	N/A	N/A
Pirolli; Peter L. T.	El Cerrito	CA	N/A	N/A

ASSIGNEE-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
Contentguard Holdings, Inc.	Wilmington	DE	N/A	N/A	02
Xerox Corporation	Stamford	CT	N/A	N/A	02

APPL-NO: 8/ 967084
DATE FILED: November 10, 1997

PARENT-CASE:
RELATED APPLICATIONS This application is a continuation of application Ser. No. 08/344,760, filed Nov. 23, 1994, now abandoned. This application is related to the following and commonly assigned patent applications: Ser. No. 08/344,041, entitled "System For Controlling The Distribution And Use Of Digital Works Having Attached Usage Rights Where The Usage Rights Are Defined By A Usage Rights Grammar" filed Nov. 23, 1994 now U.S. Pat. No. 5,715,403; Ser. No. 08/344,773, entitled "System For Controlling The Distribution And Use Of Digital Works Having A Fee Reporting Mechanism" filed Nov. 23, 1994 now U.S. Pat. No. 5,634,012; Ser. No. 08/344,042, entitled "System For Controlling the Distribution and Use Of Digital Works" filed Nov. 23, 1994 now U.S. Pat. No. 5,629,980; and Ser. No. 08/344,776, entitled "System For Controlling the Distribution and Use of Composite Digital Works" filed Nov. 23, 1994 now U.S. Pat. No. 5,638,443.

INT-CL: [7] G06F 17/60
US-CL-ISSUED: 705/1; 705/54
US-CL-CURRENT: 705/1; 705/54
FIELD-OF-SEARCH: 707/9, 707/10, 707/102, 707/200, 705/26, 705/27, 705/39, 705/1, 705/57, 705/59, 705/54, 380/232, 380/278, 380/279, 380/281

PRIOR-ART-DISCLOSED:

U.S. PATENT DOCUMENTS

Search Selected Search ALL

	PAT-NO	ISSUE-DATE	PATENTEE-NAME	US-CL
☐	5138712	August 1992	Corbin	395/700
☐	5291596	March 1994	Mita	395/600
☐	5455953	October 1995	Russell	395/739

FOREIGN PATENT DOCUMENTS

FOREIGN-PAT-NO	PUBN-DATE	COUNTRY	US-CL
0332707	September 1989	EPX	
2236604	April 1991	GBX	
WO 920022	November 1992	WOX	

OTHER PUBLICATIONS

Press Release From Electronic Publishing Resources, Inc. (EPR) entitled "National Semiconductor and EPR Partner for Information Metering/Data Security Cards", dated Mar. 4, 1994.
Weber, R., "Digital Rights Management Technology", Oct. 1995.
European Search Report for Corresponding European Application 95308422.5.
U. Flasche et al., Decentralized Processing of Documents, Comput. & Graphics, vol. 10, No. 2, 1986, pp. 119-131.
R. Mori et al., Superdistribution: The Concept and the Architecture, The Transactions of the IEICE, vol. E 73, No. 7, 1990, Tokyo, JP, pp. 1133-1146.

ART-UNIT: 214
PRIMARY-EXAMINER: Poinvil; Frantzy
ATTY-AGENT-FIRM: Nixon Peabody LLP Kaufman; Marc S.

ABSTRACT:

A system for controlling the distribution and use of digital works using digital tickets. In the present invention, a "digital ticket" is used to entitle the ticket holder to exercise some usage right with respect to a digital work. Usage rights are used to define how a digital work may be used or distributed. Each usage right may specify a digital ticket which must be present before the right may be exercised. Digital works are stored in repositories which enforce a digital works usage rights. Each repository has a "generic ticket agent" which punches tickets. In some instances only the generic ticket agent is necessary. In other instances, punching by a "special ticket agent" residing on another repository may be needed.

9 Claims, 20 Drawing figures

Class vs. Instance

```
import java.util.Date;
class DateApp {
    public static void main(String args[]) {
        Date today = new Date();
        System.out.println(today);
    }
}
```

The last line of the `main()` method uses the System class from the java.lang package to display the current date and time. First, let's break down the line of code that invokes the `println()` method, then look at the details of the argument passed to it.

Class Methods and Variables

Let's take a look at the first segment of the statement:

```
System.out.println(today);
```

The construct--`System.out`--is the full name for the `out` variable in the System class. Notice that the application never instantiated the System class and that `out` is referred to directly from the class name. This is because `out` is a *class variable*--a variable associated with the class rather than with an instance of the class. You can also associate methods with a class--*class methods*.

To refer to class variables and methods, you join the class's name and the name of the class method or class variable together with a period ('.').

Instance Methods and Variables

Methods and variables that are not class methods or class variables are known as *instance methods* and *instance variables*. To refer to instance methods and variables, you must reference the methods and variables from an instance of the class.

While System's `out` variable *is* a class variable, it *refers* to an instance of the PrintStream class (a member of the java.io package that implements the The Standard Output Stream).

When the System class is loaded into the application, the class instantiates PrintStream and assigns the new PrintStream object to the `out` class variable. Now, you have an instance of a class so you can call one of its instance methods.

```
Syst[redacted]out.println()
```

As you see, you refer to an object's instance methods and variables similar to the way you refer class methods and variables. You join an object reference (`System.out`) and the name of the instance method or instance variable (`println()`) together with a period ('.').

The Java compiler allows you to cascade these references to class and instance methods and variables together and resulting in constructs like the one that appears in the sample program:

```
System.out.println()
```

Sum it Up

Class variables and class methods are associated with a class and occur once per class. Instance methods and variables occur once per instance of a class.

The Anatomy of a Java Application

Object-Oriented Programming

Object-Oriented Programming

Outline

Handout: PDF File (13pp., 475K)

Object-Oriented Programming

Class vs. Instance

- There are two kinds of variables in a class:
  - Class variables - one/class
  - Instance variables - one/object

- There are two kinds of methods in a class:
  - Class methods - messages to the class
  - Instance methods - messages to objects

Class vs. Instance

- There are two kinds of variables in a class:
  - Class variables - one/class
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- There are two kinds of methods in a class:
  - Class methods - messages to the class
  - Instance methods - messages to objects

class vs instance

Why do you really want to use an instance instead of a class.

Why do you really want to use an instance instead of a class ?

The only conclusion I can come up with is time. If there are properties of a class that change over time and the class has at least one property that depends on another property from outside of it, then it makes sense to have an instance. An example is, say we have 50 plastic tubes that are all the same, but joined together in a tree like fashion. We could make each pipe an instance of a particular generic class or each pipe a different class that is a subclass of the generic class. If we are interested in modelling these pipes in a knowledgebase, then describing each as a different class makes sense. Each position at least gives some uniqueness to allow it to be a separate class. If we wish to use these pipes in a simulation, then we should create instances. This may be a tree of instances of the generic pipe that all the individual pipe classes derived from, or may be instances of the all the specialized pipes. That is not important. What is important is that the instances change over time, and may directly affect the values of properties in other instances.

My conclusion is that in ontologies, it only makes sense to represent objects as classes. Instances only make sense in time varying systems of objects.

A more relevant example. The branching of blood vessels. The initial solution to this was to create a single Vessel class that had 2 properties, ProximalToVessels and DistalToVessels, both of which have a range of 0 or more instances of Vessel.

It seems that this is a lazy solution for at least 2 reasons:

1. it requires us to name instances carefully as the name provides us the context, or useful information, about the particular instance.
2. we could replace the instances with any others and the knowledge base would still be semantically correct, where in fact it should be wrong.

Replacing the instances with Classes instead feels non-lazy because:

1. We are now being definate about our label - it is now a type, and we tend to be careful with types.
2. we can now assert that relationships are semantically correct and feel confident that we can't go wrong, i.e. we can't replace a left aorta with a pulmonary artery.

The added bonus is that this is a simpler rule than mixing in instances in the knowledgebase. If for example we wanted to specialize the pulmonary artery and it was an instance, we need to then change this to a class definition, and should probably also update many of the properties that reference it to now point to this specialized class of Vessel. Making it a class to start off with means there is not hassle in deciding we want to specialize from it.

If we want to run a simulation, then making an instance of each node in the tree would make sense, as now the objects are individuals who's properties obtain values which vary over time.

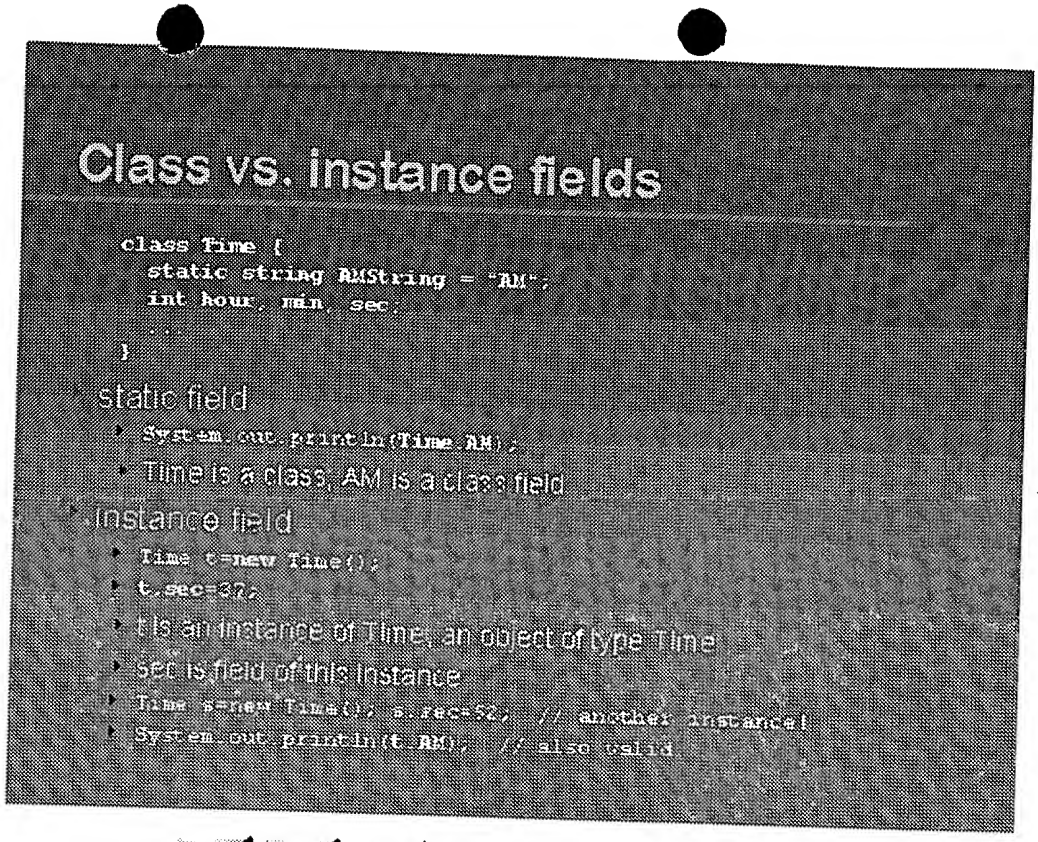
comment

1051077394

Posted by: matt at 2003-04-23

I have added a document that addresses some of this. See **Readdressing Ontologies.**

reply to this



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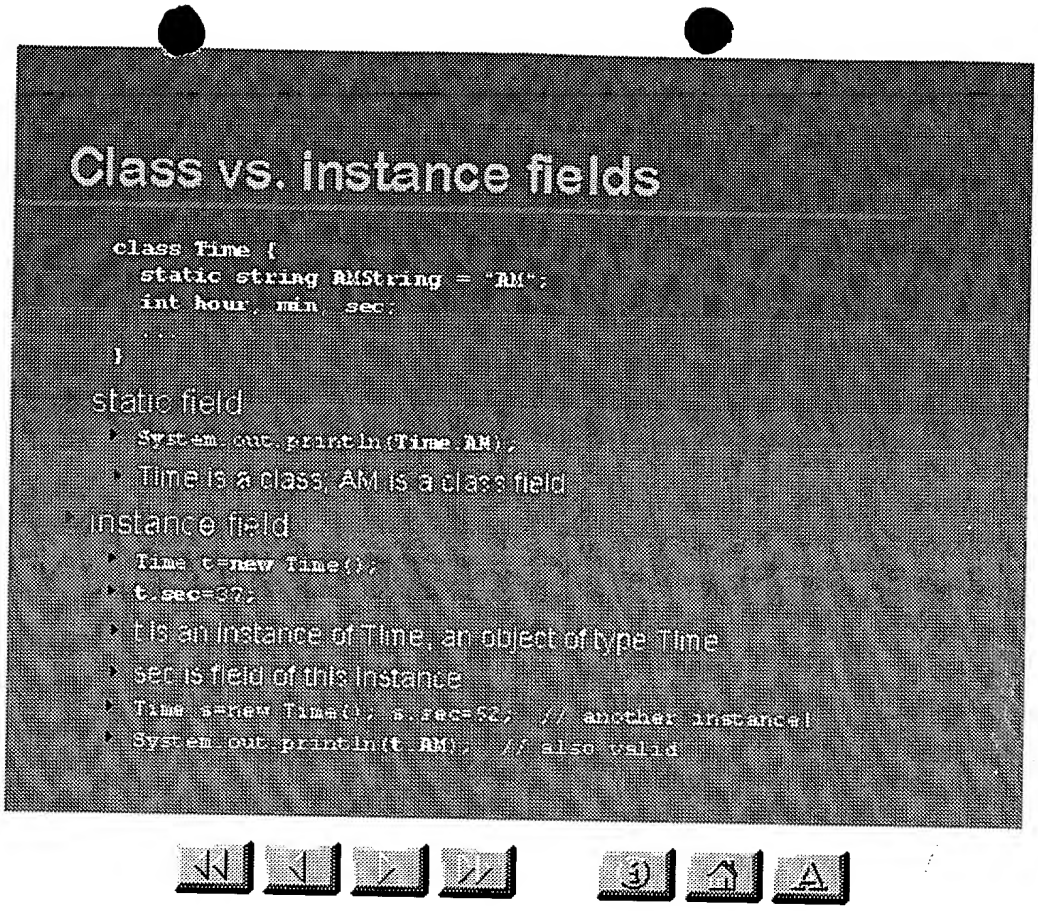

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